

ABSTRACT

This disclosure provides a rendering device that blends overlapping fragments via a hardware ordering of those fragments. The preferred device uses a fragment buffer, two depth storages and a frame buffer. In back-
 5 to-front rendering, any closest opaque or furthest transparent data is found and stored on the frame buffer. Then, one depth storage is used to hold the depth of next furthest transparent data. In a subsequent pass, the held depth is used to retrieve and
 10 process a fragment from the fragment buffer while the second depth storage is simultaneously used to identify the next furthest depth for other fragments. Usage of the depth storages is then switched in each subsequent pass. This disclosure also provides implementations
 15 compatible with front-to-back composition, antialiasing, deferred shading and pipeline architecture.

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